Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-11.   (Canceled)

12.   (Previously Presented) A method for handling a control message, the method comprising:

updating a source-group data structure using information from the control message, the source-group data structure containing data regarding a multicast group; and

adding an outgoing port index to said source-group data structure, said outgoing port index identifying a port that received the control message.

13.   (Previously Presented) The method of Claim 12, wherein said source-group data structure is a source-group table.

14.   (Previously Presented) The method of Claim 12, further comprising:

creating an entry in an outgoing port lookup table, said entry associating said outgoing port index to said port that received the control message.

15.   (Previously Presented) The method of Claim 12, further comprising:

searching in a forwarding table for a forwarding entry having a destination hardware address matching a destination hardware address for a multicast group indicated by the control message; and

updating said forwarding entry in said forwarding table if a destination hardware address matching a destination hardware address for said multicast group is found.

16. (Previously Presented) A method for handling a control message, the method comprising:

deriving an explicit source lookup key from the control message;

retrieving an outgoing port index associated with an entry in a session data structure, said entry corresponding to said explicit source lookup key; and

updating an outgoing lookup table entry corresponding to said outgoing port index with information regarding designated devices in said multicast group indicated by the control message.

17. (Previously Presented) The method of Claim 16, wherein said session data structure is a session table.

18. (Previously Presented) A method for handling a control message, the method comprising:

determining if the control message establishes shared source distribution trees or explicit source distribution trees;

updating a source-group data structure using information from the control message, the source-group data structure containing data regarding a multicast group, if the control message establishes shared source distribution trees;

adding an outgoing port index to said source-group data structure, said outgoing port index identifying a port that received the control message, if the control message establishes shared source distribution trees;

deriving an explicit source lookup key from the control message if the control message establishes explicit source distribution trees;

retrieving an outgoing port index associated with an entry in a session data structure, said entry corresponding to said explicit source lookup key, if the control message establishes explicit source distribution trees; and

updating an outgoing lookup table entry corresponding to said outgoing port index with information regarding designated devices in said multicast group indicated by the control message if the control message establishes explicit source distribution trees.

19.   (Previously Presented) The method of Claim 18, wherein said source-group data structure is a source-group table.

20.   (Previously Presented) The method of Claim 18, further comprising:

creating an entry in an outgoing port lookup table, said entry associating said outgoing port index to said port that received the control message if the control message establishes shared source distribution trees.

21.   (Previously Presented) The method of Claim 18, further comprising:

searching in a forwarding table for a forwarding entry having a destination hardware

address matching a destination hardware address for a multicast group indicated by the control

message if the control message establishes shared source distribution trees; and

updating said forwarding entry in said forwarding table if a destination hardware address

matching a destination hardware address for said multicast group is found and if the control

message establishes shared source distribution trees.

22.   (Previously Presented) The method of Claim 18, wherein said session data structure is a

session table.

23.   (Previously Presented) The method of Claim 18, further comprising:

determining if the control message is a hello or join/prune message; and

performing said determining, updating a source-group data structure, adding, deriving,

retrieving, and updating an outgoing lookup table entry only if said control message is a

join/prune message.

24.   (Previously Presented) The method of Claim 23, further comprising:

creating or updating a neighbor list using said hello message, said neighbor list

identifying address and port information regarding a device which sent the control message.

25.   (Previously Presented) An apparatus for handling a control message, the apparatus

comprising:

means for updating a source-group data structure using information from the control message, the source-group data structure containing data regarding a multicast group; and

means for adding an outgoing port index to said source-group data structure, said outgoing port index identifying a port that received the control message.

26.   (Previously Presented) The apparatus of Claim 25, wherein said source-group data structure is a source-group table.

27.   (Previously Presented) The apparatus of Claim 25, further comprising:

means for creating an entry in an outgoing port lookup table, said entry associating said outgoing port index to said port that received the control message.

28.   (Previously Presented) The apparatus of Claim 25, further comprising:

means for searching in a forwarding table for a forwarding entry having a destination hardware address matching a destination hardware address for a multicast group indicated by the control message; and

means for updating said forwarding entry in said forwarding table if a destination hardware address matching a destination hardware address for said multicast group is found.

29.   (Previously Presented) An apparatus for handling a control message, the apparatus comprising:

means for deriving an explicit source lookup key from the control message;

means for retrieving an outgoing port index associated with an entry in a session data structure, said entry corresponding to said explicit source lookup key; and

means for updating an outgoing lookup table entry corresponding to said outgoing port index with information regarding designated devices in said multicast group indicated by the control message.

30. (Previously Presented) The method of Claim 29, wherein said session data structure is a session table.

31. (Previously Presented) An apparatus for handling a control message, the apparatus comprising:

means for determining if the control message establishes shared source distribution trees or explicit source distribution trees;

means for updating a source-group data structure using information from the control message, the source-group data structure containing data regarding a multicast group, if the control message establishes shared source distribution trees;

means for adding an outgoing port index to said source-group data structure, said outgoing port index identifying a port that received the control message, if the control message establishes shared source distribution trees;

means for deriving an explicit source lookup key from the control message if the control message establishes explicit source distribution trees;

means for retrieving an outgoing port index associated with an entry in a session data structure, said entry corresponding to said explicit source lookup key, if the control message

establishes explicit source distribution trees; and

means for updating an outgoing lookup table entry corresponding to said outgoing port index with information regarding designated devices in said multicast group indicated by the control message if the control message establishes explicit source distribution trees.

32.   (Previously Presented) The apparatus of Claim 31, wherein said source-group data structure is a source-group table.

33.   (Previously Presented) The apparatus of Claim 31, further comprising:

means for creating an entry in an outgoing port lookup table, said entry associating said outgoing port index to said port that received the control message if the control message establishes shared source distribution trees.

34.   (Previously Presented) The apparatus of Claim 31, further comprising:

means for searching in a forwarding table for a forwarding entry having a destination hardware address matching a destination hardware address for a multicast group indicated by the control message if the control message establishes shared source distribution trees; and

means for updating said forwarding entry in said forwarding table if a destination hardware address matching a destination hardware address for said multicast group is found and if the control message establishes shared source distribution trees.

35.   (Previously Presented) The apparatus of Claim 31 wherein said session data structure is a session table.

36.   (Previously Presented) The apparatus of Claim 31, further comprising:

means for determining if the control message is a hello or join/prune message; and

means for performing said determining, updating a source-group data structure, adding,

deriving, retrieving, and updating an outgoing lookup table entry only if said control message is a

join/prune message.

37.   (Previously Presented) The apparatus of Claim 36, further comprising:

creating or updating a neighbor list using said hello message, said neighbor list

identifying address and port

38.   (Previously Presented) A program storage device readable by a machine, tangibly

embodying a program of instructions executable by the machine to perform a method for

handling a control message, the method comprising:

updating a source-group data structure using information from the control message, the

source-group data structure containing data regarding a multicast group; and

adding an outgoing port index to said source-group data structure, said outgoing port

index identifying a port that received the control message.

39.   (Previously Presented) A program storage device readable by a machine, tangibly

embodying a program of instructions executable by the machine to perform a method for

handling a control message, the method comprising:

deriving an explicit source lookup key from the control message;

retrieving an outgoing port index associated with an entry in a session data structure, said

entry corresponding to said explicit source lookup key; and

updating an outgoing lookup table entry corresponding to said outgoing port index with

information regarding designated devices in said multicast group indicated by the control

message.

40.   (Previously Presented) A program storage device readable by a machine, tangibly

embodying a program of instructions executable by the machine to perform a method for method

for handling a control message, the method comprising:

determining if the control message establishes shared source distribution trees or explicit

source distribution trees;

updating a source-group data structure using information from the control message, the

source-group data structure containing data regarding a multicast group, if the control message

establishes shared source distribution trees;

adding an outgoing port index to said source-group table, said outgoing port index

identifying a port that received the control message, if the control message establishes shared

source distribution trees;

deriving an explicit source lookup key from the control message if the control message

establishes explicit source distribution trees;

retrieving an outgoing port index associated with an entry in a session data structure, said

entry corresponding to said explicit source lookup key, if the control message establishes explicit

source distribution trees; and

updating an outgoing lookup table entry corresponding to said outgoing port index with

information regarding designated devices in said multicast group indicated by the control message if the control message establishes explicit source distribution trees.

41.   (Previously Presented) A method for handling a control message, the method comprising:

deriving a shared source lookup key from multicast group information in the control message;

searching a forwarding data structure for a forwarding entry having a shared source lookup key matching the shared source lookup key; and

if a forwarding entry having a shared source lookup key matching the destination shared source lookup key is found, revising an associated outgoing port in the forwarding entry to match an incoming port for the control message.

42.   (Previously Presented) The method of Claim 41, wherein the shared source lookup key is a destination media access control (MAC) address for the control message.

43.   (Previously Presented) The method of Claim 41, wherein the source-group data structure is a source-group table.

44.   (Previously Presented) The method of Claim 41, wherein the forwarding data structure is a forwarding table.

45.   (Previously Presented) The method of Claim 41, further comprising:

extracting multicast group information from the control message;

updating a source-group data structure with the multicast group information; and

adding an outgoing port index to the source-group table, the outgoing port index

identifying a port that received the control message.

46.   (Previously Presented) A method for handling a control message, the method

comprising:

deriving an explicit source lookup key from the control packet;

searching a session data structure for a session entry having an explicit source lookup key

matching the derived explicit source lookup key; and

if a session entry having an explicit source lookup key matching the derived explicit

source lookup key is found, revising an associated outgoing port in the session entry to match an

incoming port for the control message.

47.   (Previously Presented) The method of Claim 46, wherein the explicit source lookup key

is a combination of a multicast source network address, a destination network address, an

incoming port for the control message, and a protocol type.

48.   (Previously Presented) The method of Claim 46, wherein the source-group data structure

is a source-group table.

49.   (Previously Presented) The method of Claim 46, wherein the forwarding data structure is

a forwarding table.

50.   (Previously Presented) The method of Claim 46, further comprising:

   extracting multicast group information from the control message;

   updating a source-group data structure with the multicast group information; and

   adding an outgoing port index to the source-group table, the outgoing port index

identifying a port that received the control message.